Preliminary Amendment

IN THE CLAIMS

Please cancel claims 1 - 36 and 47 - 50.

Please amend the claims to read as indicated herein.

- 1 36. (canceled)
- 37. (currently amended) A system for pumping thermal energy, comprising:
- a heater for heating a liquid;
- a gas-liquid contactor for adding vapor from said liquid to a process gas to produce a vaporcontaining gas; <u>and</u>
- a membrane permeator for removing said vapor from said vapor-containing gas and for providing a resultant vapor;
- wherein said system transfers a quantity of thermal energy from said heater to said resultant vapor.
- 38. (original) The system of claim 37, further comprising a heat exchanger through which said resultant vapor is routed for heating a media.
- 39. (original) The system of claim 38, wherein said resultant vapor heats said media by condensation and releases latent heat.
 - 40. (original) The system of claim 37,
 - wherein said vapor permeates from a feed side of said membrane permeator to a permeate side of said membrane permeator, and
 - wherein said system further comprises an arrangement for increasing a driving force between said feed side and said permeate side.

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- 41. (original) The system of claim 40, wherein said arrangement employs a technique selected from the group consisting of (a) sweeping a dry gas proximate to said permeate side, (b) applying a vacuum to said permeate side, and (c) allowing a portion of said vapor-containing gas to permeate said membrane.
 - 42. (original) The system of claim 37, wherein said membrane permeator discharges a retentate gas, and wherein said arrangement refluxes a portion of said retentate gas into said permeate side.
 - 43. (original) The system of claim 37,
 - wherein said heater comprises a heat exchanger for transferring heat from a waste heat source to said liquid, and
 - wherein said quantity of thermal energy comprises thermal energy from a source selected from the group consisting of (a) a waste heat, (b) solar heat, (c) low level heat, (d) a furnace, (e) flue gas, (f) geothermal heat, (g) steam, (h) hot water, (i) burning fuel, (j) burning gas, (k) electrical and (l) geothermal.
- 44. (original) The system of claim 37, further comprising a heat exchanger for transferring energy between said vapor-containing gas and said liquid, before said liquid enters said gas-liquid contactor and after said vapor-containing gas exits from said gas-liquid contactor.
- 45. (original) The system of claim 37, further comprising a heat exchanger for transferring energy between said process gas and said liquid, before said process gas enters said gas-liquid contactor and after said liquid exits from said gas-liquid contactor.
- 46. (original) The system of claim 37, wherein said gas-liquid contactor comprises a unit selected from the group consisting of (a) cooling tower, (b) a spray contactor, (c) an atomizing contactor, (d) a dripping contactor, (e) a sprinkler contactor, (f) a wet pad contactor, (g) a packed

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column, (h) a plates column, (i) a baffle tower, (j) a membrane contactor, (k) a humidifier, (l) an evaporator and (m) a flash evaporator.

47 – 50. (canceled)